New Patent Claim 1

An electronically commutatable motor, whose excitation windings are controllable via semiconductor output stages (EST) by an electronic control unit (STE) with the aid of PWM control signals (PWM_{ansteu}), a setpoint value ($N_{setpoint}$) being specifiable to the control unit (STE), and the control unit (STE) emitting corresponding PWM control signals (PWM) to the semiconductor output stages (EST); a motor characteristic curve, from which an assigned nominal operating speed (n_x) is derivable for the setpoint value ($N_{setpoint}$), being stored in the control unit (STE), and the derived nominal operating speed (n_x) being able to be compared to the actual speed (N_{actual}) of the motor (M), and if a predefinable or predefined speed difference (ΔN) between the nominal operating speed (n_x) and the actual speed (N_{actual}) is exceeded, the control unit (STE) and/or the semiconductor output stages (EST) is/are able to be switched off,
wherein the motor characteristic curve is stored as a characteristics field (KF) having four three-dimensional corner points (x, y, z); in the x-axis, the limiting values (u_1 and u_2) of the supply voltage, and in the z-axis, the limiting values ($pwm_{..}$ and $pwm_{..}$) of the PWM control signals determine the operating speeds ($n_{..}$, $n_{..}$, $n_{..}$ and $n_{..}$) of the four corner points of the characteristics field (KF) for a predefined, constant load; and the connecting lines ($n_{..}$-$n_{..}$; $n_{..}$-$n_{..}$; $n_{..}$-$n_{..}$; $n_{..}$-$n_{..}$) between the corner points of the characteristics field (KF) permit the formation of a grid, from which,

actual speed ($N_{...}$).

2. The electronically commutatable motor as recited in Claim 1,
wherein the four corner points of the characteristics field (KF) are determined for a predefined motor load.

3. The electronically commutatable motor as recited in Claim 1 or 2,
wherein the comparison between the nominal operating speed (n_x) and the actual speed (N_{actual}) is able to be carried out continually during the continuous operation of the motor, or repeated at time intervals.

4. The electronically commutatable motor as recited in one of Claims 1 through 3,
wherein the setpoint value ($N_{setpoint}$) is specifiable manually using a potentiometer.

5. The electronically commutatable motor as recited in one of Claims 1 through 4,
wherein, for the comparison of the nominal operating speed (n_x) and the actual speed (N_{actual}), the control unit (STE) is assigned a comparator unit (VE) which is preferably integrated into the control unit (STE).

6. The electronically commutatable motor as recited in one of Claims 1 through 5,
wherein the switch-off (off) of the control unit (STE) and or of the semiconductor output stages (EST) is carried out in a time-delayed manner.

7. The electronically commutatable motor as recited in

duration has expired.

3. The electronically commutatable motor as recited in Claim 7,
wherein the run-up phase is able to be initiated with the switching-on of the control unit (STE) and/or the semiconductor output stages (EST), and/or the input of a setpoint value ($N_{setpoint}$).